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Subject: June Monthly Report

M/870 - M/1187 12/20 Ga. Cantilever Scope Mount Redesign

To date, all initial design and drawing work is complete. Marketing has been shown preliminary drawings and pictures of the the new design and they have expressed satisfaction with Research's primary approach.

Prototypes have been initiated to verify the welding of the cantilever to the barrel and are scheduled to be complete by July 7. Four prototypes are also being fabricated for catalog photography and will be available in August.

M/870 - M/11-87 Synthetic Stock and Fore End

Computer modeling of the M/11-87 stock is complete and is being prototyped. Sample preparation using the computer generated surfaces will be complete at the end of July. Upon successful completion of this process, transmittal will begin.

The fore end designs for both the M/11-87 and M/870 are complete and the M/870 design is being prototyped in wood to verify the surface model.

Wood samples are also being fabricated for catalog photography and will be available in early August.

M/870 Synthetic Trigger Guard

Preliminary modeling and design work for an all synthetic trigger guard is complete and preliminary detail drawings are also complete. These drawings have been turned over to process engineering for their review.

Material investigation is ongoing. An old prototype synthetic trigger guard tool has been altered. We are currently in the process of scheduling with the mold vendor a time we can shoot this mold. Testing to determine the optimum material will begin after this is accomplished.

M/7400 22-250 Cal.

Process engineering has been requested to make 15 rifles in .22-250 for test and evaluation. This rifle is intended for the Canadian market. Samples are expected to be complete in August.

#### SWS Detachable Magazine Box

An engineering evaluation of the feasibility and cost of adding a detachable magazine box to the SWS for a potential 2000 unit foreign sale is being investigated. A preliminary layout has been started and search for information on the M/14 magazine box has also been initiated.

#### M/522 Viper

With the successful completion of all testing and the rifle's turn over to production, work on the M/522 has now been directed to cost cutting and product improvement items.

A 10 shot synthetic magazine box mold was received and 50 parts were molded out of LCP plastic. The Test Lab has received these boxes for testing along with 10 rifles. Initial impressions indicate that a metal insert for the lip area of the mold will still be required to prevent the rounds from "cutting" through the synthetic lips.

Additionally, Research and Process Engineering are looking at an assembly aid design that is glued in versus sonically welded. Research is also investigating .5 lb. to 1 lb. reduction in trigger pull through the use of a firing pin spring modification or sear profile change. Process Engineering and Research are also evaluating firing pin carriers made from a composite mix of Hytrel.

#### M/541 Improvements

Work has been initiated to incorporate several design improvements based on customer requests and complaints.

The first of these is a metal magazine box. To date, a sample MIM metal magazine box based on the M/522 box has been designed and one sample has been fabricated. This sample is currently undergoing evaluation and will be shown to Marketing at the next Product Team meeting.

The second improvement is the utilization of two takedown screws rather than the current single screw design to enhance the bedding of the rifle.

Third, a change to the barrel attachment design is being investigated also to improve accuracy. Currently, the barrel is pinned to the receiver. A threaded joint is being investigated.

#### 5R Rifling

On January 14, 18 30-06 cal. 5R M/700's and 20 .308 cal. 5R M/700's were turned over to the Test Lab for evaluation and testing. Testing will be comprised of accuracy and endurance testing but has been delayed due to other project priorities.

Canadian Ranger Rifle

Six M/700 Stainless Steel rifles were prepared for shipment to the Canadian Army for environmental testing and evaluation of three different metal finishes; black oxide, powder coat, and black chrome. The Canadian Army has now indicated a funding delay of this program and as a consequence the rifles will now be tested by Remington as time and priorities permit.

NCS

To date only some preliminary discussions have taken place between Firearms Research, Ammunition Research, and Marketing on what the performance criteria and specifications for this new family line of shotguns should be. A meeting needs to be scheduled between the various interested parties to iron out objectives and scheduling.